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AVX
Tantalum Range Extensions

New Releases

Pressure on system performance, features, size and weight continue to challenge design engineers worldwide. AVX continues to invest significant Research and Development funds to develop new processes and products aimed at satisfying system designers challenges.

This range extension brochure identifies the Tantalum capacitors that have recently been released. Samples of these can be obtained by contacting your local sales office.

Recent highlights include: –

TACmicrochip – the world's first 0603 Tantalum capacitor.

V case – high capacitance in low profile package, and industry standard footprint.

TPL – low ESR leaded family.

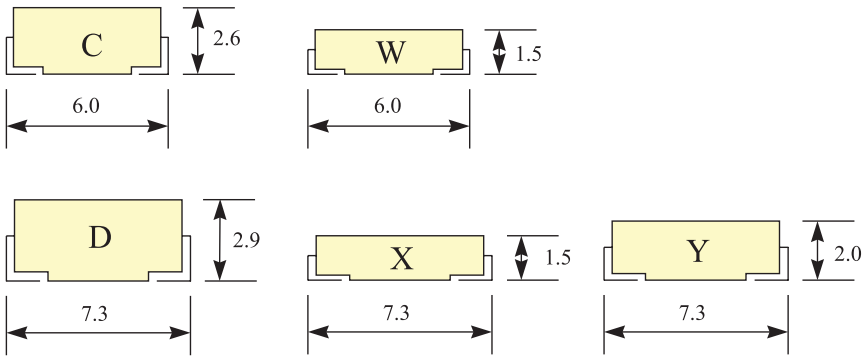
E470/10, D220/10, D150/16, B100/4, D33/35 – high capacitance in new smaller packages.

TAJ Series: New Releases

Capacitance		Rated Voltage (Ur) at 85°C								
µF	Code	2V	4V	6.3V	10V	16V	20V	25V	35V	50V
0.10	104									
0.15	154									
0.22	224									
0.33	334									
0.47	474									
0.68	684									
1.0	105									
1.5	155								A	
2.2	225				R			A		
3.3	335									
4.7	475								B	
6.8	685					A		B		
10	106		R			W			C	
15	156			T	A		B		C	
22	226			A		B			D	
33	336		A		B		C	D	D	
47	476	A				C		D		
68	686		B	B	C		D			
100	107		B		C	D				
150	157	B		C		D				
220	227		C	C	D					
330	337				E/V					
470	477			V	E					
680	687									
1000	108									

Low Profile

Primarily introduced for designs where height is the critical factor, our Low Profile Tantalum capacitor range has now been broadened to include Low Profile versions of the traditional ‘C’ and ‘D’ case sizes. These are represented as ‘W’, ‘X’ and ‘Y’.



‘W’ and ‘X’ case sizes are targeted at multi-PCB systems that have a maximum component height of 1.5mm. This makes these case sizes ideal for applications such as Mobile and Dual Mode Phones, PCMCIA cards, PDA’s, Disk Drives, Portable PC’s, and applications that have a height restriction. The ‘Y’ case size offers more capacitance in a slightly higher package size but maintaining a height significantly less than either a ‘C’ or ‘D’ case size.

TAJ Series: Planned Releases in 1998

Capacitance		Rated Voltage (Ur) at 85°C								
µF	Code	2V	4V	6.3V	10V	16V	20V	25V	35V	50V
0.10	104									
0.15	154									
0.22	224									
0.33	334									
0.47	474									
0.68	684									
1.0	105						R			
1.5	155					R	R			
2.2	225					R				
3.3	335				R	S				
4.7	475			R	R		T			
6.8	685			R	S	T	T		W	
10	106			R/S		A/T		W	X	
15	156	R	S		T		W	X	Y	
22	226	S	T	T	A	W	B	C/Y		
33	336	T	T	A/W	W	B	X		E	
47	476	T	A		B/W	X	C/Y	E	E	
68	686	A		W		C/Y		E		
100	107		W	B	X		D/E			
150	157	W	B	X	Y		E			
220	227	B	X	Y		D/E				
330	337	C/X	Y		D	E				
470	477	Y		D						
680	687		D/E	E						
1000	108	D	E							
1500	158	D	E							

AVX pioneered Low ESR Tantalum with the introduction of its TPS family in 1991. The TPS range continues to expand and we have now added TPL to offer an alternative to Aluminum Capacitors, Oscon's and Poscap range.

TPS Series

Capacitance		Rated Voltage (Ur) at 85°C								
µF	Code	2V	4V	6.3V	10V	16V	20V	25V	35V	50V
1.0	105									
1.5	155							A(3000)		
2.2	225									
3.3	335					A(3500)				
4.7	475						A(1800)	B(1500)	C(600)	
6.8	685									
10	106				A(1800)		B(1000)	C(500)	D(300)	
15	156			A(1500)		B(800)	C(450)		D(300)	
22	226				B(700)	C(375)		D(200)	D(400) E(200-300)	
33	336			B(600)	C(375-500)	C(300)	D(200)	E(175-300)	D(300)	
47	476				C(350)	C(350) D(150-200)	E(150)	D(250)		
68	686					D(150)	E(125-150)	V(95-150)		
100	107			C(150)	D(65-150)	D(125-150) E(100-150)	V(85-200)			
150	157			D(125)	D(100)	D(150)				
220	227			D(100)	D(150) E(60-150)	V(75-150)				
330	337			E(100-150)	E(60-100) V(60-100)					
470	477			V(55-100)	E(50-200)					
680	687									
1000	108									

ESR level for TPS is quoted in the brackets and is in milli-ohms
NOTE: The CECC standards for low ESR Solid Tantalum Capacitors allow an ESR movement to 1.25 times catalog limit post mounting

TPL Series

Capacitance		Rated Voltage (Ur) at 85°C								
µF	Code	2V	4V	6.3V	10V	16V	20V	25V	35V	50V
1.0 1.5 2.2	105 155 225									
3.3 4.7 6.8	335 475 685									
10 15 22	106 156 226									
33 47 68	336 476 686			F(400)	G(300)					
100 150 220	107 157 227			H(200) K(200)	K(200) P(200)					

The TPL series are leaded capacitors which like the TPS series has the advantage over the standard range with its inherent low ESR. It is designed and conditioned to operate to 105°C and is available loose or taped and reeled for auto insertion.

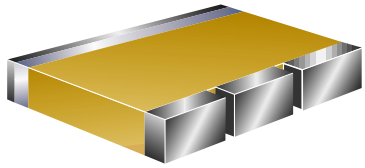
TPL can accommodate almost any power supply application and the 10:1 replacement rule (i.e. 1000µF Aluminum can be replaced by a 100µF Tantalum) against aluminum capacitors makes the TPL the ideal product in power supplies.

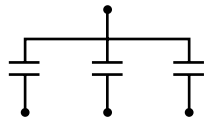
TACmicrochip

Available today in TACmicrochip

Capacitance		Rated Voltage (Ur) at 85°C				
µF	Code	2V	3V	4V	6.3V	10V
0.33	334					
0.47	474					L
0.68	684					L
1.0	105				L	L
1.5	155			L	L	
2.2	225		L	L		
3.3	335	L	L			R
4.7	475	L				R
6.8	685				R	R
10	106			R	R	
15	156		R	R		
22	226	R	R			
33	336					
47	476					
68	686					

Capacitor Array





Development in TACmicrochip

Capacitance		Rated Voltage (Ur) at 85°C				
µF	Code	2V	3V	4V	6.3V	10V
0.33	334					
0.47	474					
0.68	684					
1.0	105					
1.5	155					L
2.2	225				L	L
3.3	335			L	L	
4.7	475		L	L		
6.8	685	L	L			
10	106	L				R
15	156				R	R
22	226			R	R	
33	336		R	R		
47	476	R	R			
68	686	R				

TACmicrochip is a major breakthrough in miniaturization without reduction in performance. The unique manufacturing process allows AVX to offer the world's first molded 0603 Tantalum capacitor.

It offers you the highest energy storage in an 0603 case size, typically 10 times more capacitance, lower ESR than that compared to a traditional 0805 package and enhanced frequency and Leakage current efficiency. This makes TACmicrochip the ideal choice for your low profile, higher performance applications. TACmicrochip is already being used in Medical applications where size, weight and performance are critical. For size critical application such as PCMCIA cards, cellular phones, pagers, multichip modules and Personal Digital Assistants, TACmicrochip broadens designer options even further. TACmicrochip delivers high capacitance, low ESR and low Leakage current enabling designers to continue to improve system size, performance and efficiency.

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